Antenna Radiation Pattern Data

KTVW License Partnership, G.P.

KDOS-LD Globe, AZ

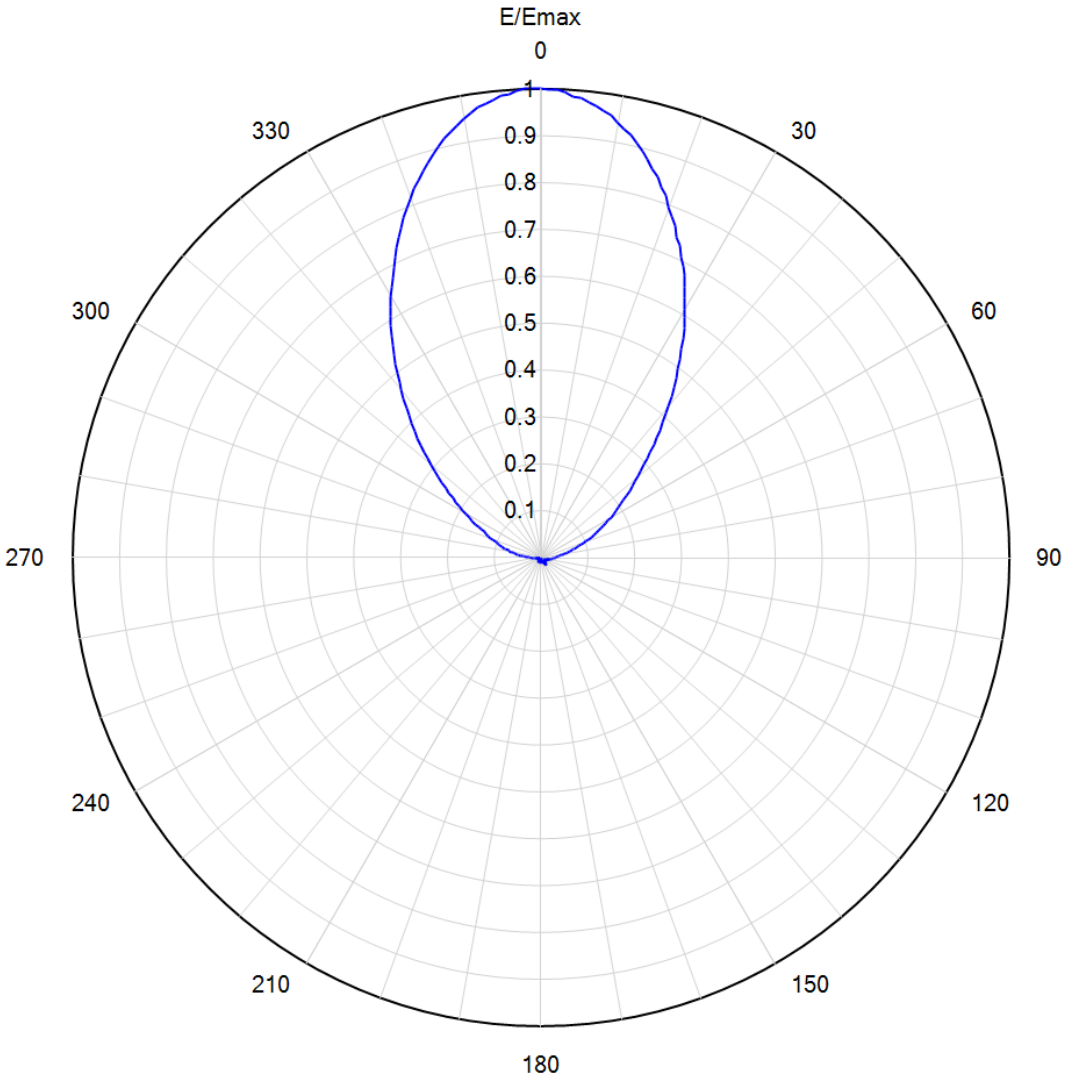
Ch 29 15 kW-DA 1001 m

The RFS PEPL-3A antenna proposed for use by KDOS-LD comprises three stacked antenna panels. Rearward radiation is highly suppressed, being the vector sum of panel reflector screen leakage and scatter around the screen edges. Consequently, the radiation values (suppressed > 17 dB) for angles 65° and farther from the antenna lobe centerline vary considerably, with the vertically polarized component sometimes exceeding the horizontally polarized component. By the random nature of radiation within this suppression zone, it is not possible to guarantee that the vertically-polarized component of actual radiation will not exceed the horizontally-polarized component within that wide sector.

The radiation values shown on the Application for Minor Modification, from 70° through 290° from the lobe center bearing, are “envelope”, “not to exceed” values that accommodate both the horizontally- and vertically-polarized components. The suppression specified within much of this sector exceeds 30 dB.

The attached RFS antenna data is for the actual antenna, not the “envelope” pattern specified in the Form.

Azimuth Pattern



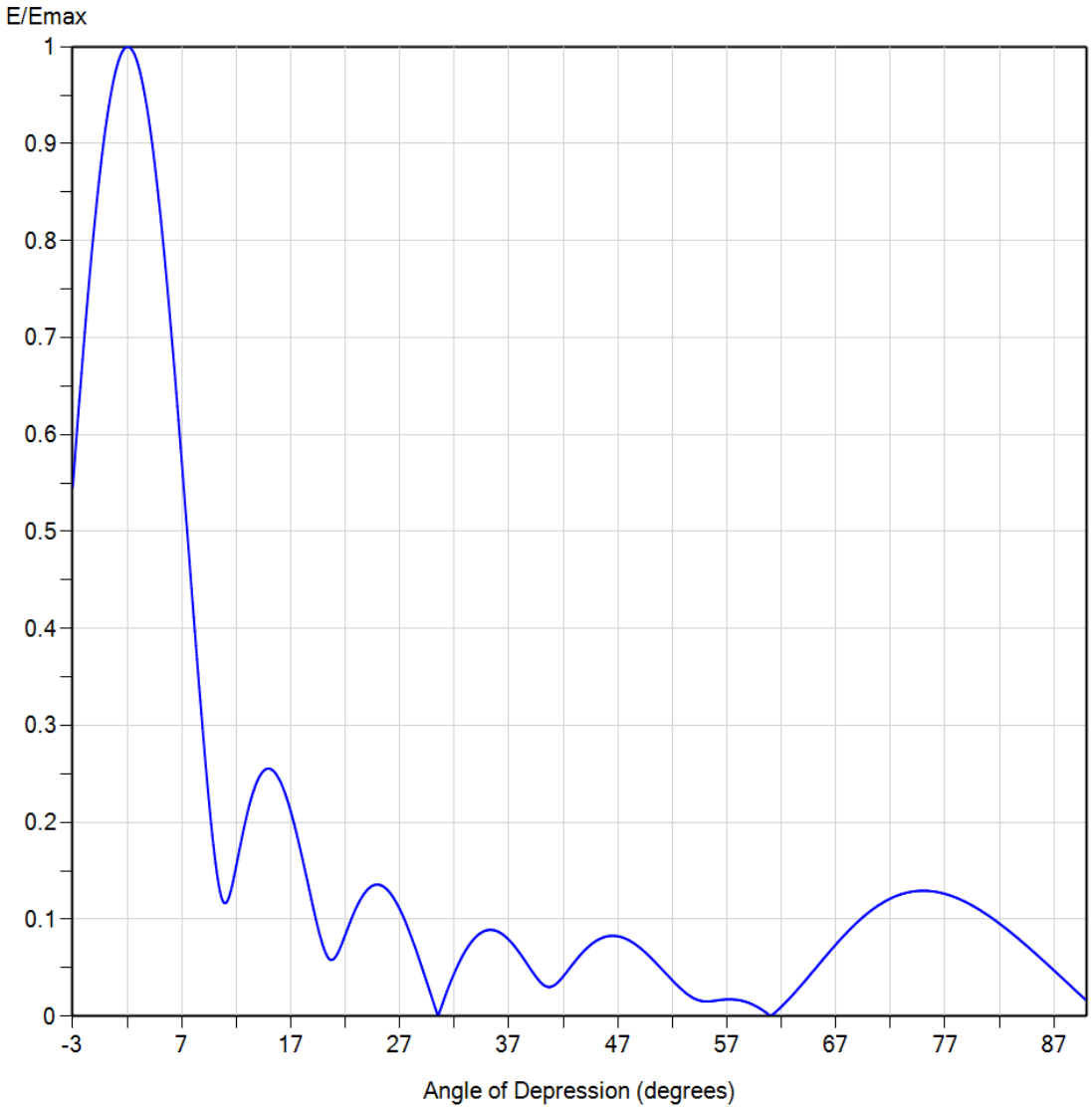
Model:	PEPL3A	Polarization:	Horizontal
Location:	Globe Az	Frequency:	563.00 MHz
Customer:	Univision	Directivity:	6.5 (8.14 dB)
Date:	July 27, 2018	Elevation Angle:	2.00 degrees
Rotation Angle:	0 degrees	Horizontal Unit Pattern:	
Note: Pattern Tolerance +/-5% of Emax		File = az_h_imm_unit_563.pat	

Model:	**PEPL3A**	Polarization:	**Horizontal**
Location:	**Globe, AZ**	Frequency (MHz):	**563.00**
Customer:	**Univision**	Directivity:	**6.5 (8.14 dB)**
Date:	**July 27, 2018**	Elevation Angle:	**2.00 degrees**
		Rotation Angle:	**0 degrees**

TABULATED AZIMUTH PATTERN

Angl	Field	Angl	Field	Angl	Field	Angl	Field	Angl	Field	Angl	Field	Angl	Field	Angl	Field
0	1.000	45	0.341	90	0.031	135	0.013	180	0.012	225	0.004	270	0.026	315	0.382
1	0.998	46	0.323	91	0.031	136	0.012	181	0.012	226	0.002	271	0.027	316	0.399
2	0.998	47	0.312	92	0.030	137	0.016	182	0.010	227	0.004	272	0.033	317	0.414
3	0.995	48	0.296	93	0.028	138	0.017	183	0.011	228	0.004	273	0.037	318	0.430
4	0.986	49	0.282	94	0.027	139	0.014	184	0.008	229	0.006	274	0.040	319	0.448
5	0.984	50	0.270	95	0.025	140	0.015	185	0.008	230	0.004	275	0.044	320	0.466
6	0.976	51	0.258	96	0.023	141	0.018	186	0.007	231	0.005	276	0.048	321	0.480
7	0.971	52	0.246	97	0.023	142	0.015	187	0.007	232	0.006	277	0.052	322	0.499
8	0.962	53	0.236	98	0.024	143	0.018	188	0.008	233	0.005	278	0.057	323	0.518
9	0.955	54	0.224	99	0.021	144	0.019	189	0.007	234	0.006	279	0.060	324	0.533
10	0.943	55	0.214	100	0.021	145	0.017	190	0.007	235	0.005	280	0.064	325	0.552
11	0.930	56	0.205	101	0.019	146	0.013	191	0.005	236	0.003	281	0.069	326	0.570
12	0.920	57	0.197	102	0.020	147	0.017	192	0.007	237	0.004	282	0.071	327	0.588
13	0.907	58	0.187	103	0.018	148	0.017	193	0.006	238	0.005	283	0.077	328	0.606
14	0.892	59	0.181	104	0.018	149	0.015	194	0.007	239	0.004	284	0.080	329	0.622
15	0.878	60	0.172	105	0.017	150	0.016	195	0.006	240	0.005	285	0.085	330	0.642
16	0.863	61	0.164	106	0.016	151	0.014	196	0.007	241	0.002	286	0.090	331	0.658
17	0.849	62	0.155	107	0.014	152	0.014	197	0.008	242	0.003	287	0.094	332	0.675
18	0.830	63	0.149	108	0.017	153	0.012	198	0.010	243	0.000	288	0.098	333	0.693
19	0.818	64	0.142	109	0.013	154	0.011	199	0.010	244	0.002	289	0.102	334	0.712
20	0.796	65	0.135	110	0.013	155	0.013	200	0.009	245	0.002	290	0.108	335	0.729
21	0.779	66	0.129	111	0.015	156	0.012	201	0.009	246	0.004	291	0.114	336	0.747
22	0.763	67	0.122	112	0.015	157	0.010	202	0.008	247	0.003	292	0.121	337	0.765
23	0.742	68	0.116	113	0.013	158	0.006	203	0.010	248	0.003	293	0.128	338	0.783
24	0.728	69	0.107	114	0.015	159	0.006	204	0.008	249	0.005	294	0.133	339	0.798
25	0.707	70	0.102	115	0.012	160	0.005	205	0.011	250	0.004	295	0.142	340	0.813
26	0.691	71	0.097	116	0.012	161	0.003	206	0.011	251	0.004	296	0.148	341	0.832
27	0.674	72	0.090	117	0.010	162	0.002	207	0.011	252	0.004	297	0.157	342	0.846
28	0.652	73	0.084	118	0.008	163	0.002	208	0.009	253	0.005	298	0.166	343	0.862
29	0.633	74	0.080	119	0.009	164	0.004	209	0.010	254	0.008	299	0.175	344	0.875
30	0.612	75	0.074	120	0.011	165	0.005	210	0.009	255	0.007	300	0.183	345	0.891
31	0.596	76	0.070	121	0.008	166	0.004	211	0.010	256	0.006	301	0.194	346	0.904
32	0.577	77	0.067	122	0.007	167	0.007	212	0.009	257	0.007	302	0.205	347	0.917
33	0.558	78	0.062	123	0.008	168	0.007	213	0.009	258	0.005	303	0.216	348	0.928
34	0.535	79	0.057	124	0.007	169	0.008	214	0.010	259	0.006	304	0.227	349	0.939
35	0.517	80	0.054	125	0.006	170	0.009	215	0.007	260	0.006	305	0.240	350	0.950
36	0.497	81	0.050	126	0.008	171	0.010	216	0.006	261	0.008	306	0.251	351	0.961
37	0.480	82	0.048	127	0.007	172	0.010	217	0.006	262	0.006	307	0.265	352	0.971
38	0.461	83	0.044	128	0.010	173	0.011	218	0.006	263	0.010	308	0.277	353	0.975
39	0.442	84	0.042	129	0.010	174	0.012	219	0.006	264	0.010	309	0.292	354	0.982
40	0.423	85	0.041	130	0.010	175	0.012	220	0.005	265	0.011	310	0.308	355	0.989
41	0.408	86	0.039	131	0.012	176	0.012	221	0.002	266	0.014	311	0.321	356	0.991
42	0.389	87	0.036	132	0.010	177	0.012	222	0.003	267	0.017	312	0.335	357	0.997
43	0.372	88	0.034	133	0.012	178	0.011	223	0.003	268	0.020	313	0.351	358	1.000
44	0.356	89	0.034	134	0.013	179	0.011	224	0.003	269	0.023	314	0.366	359	1.000

Elevation Pattern



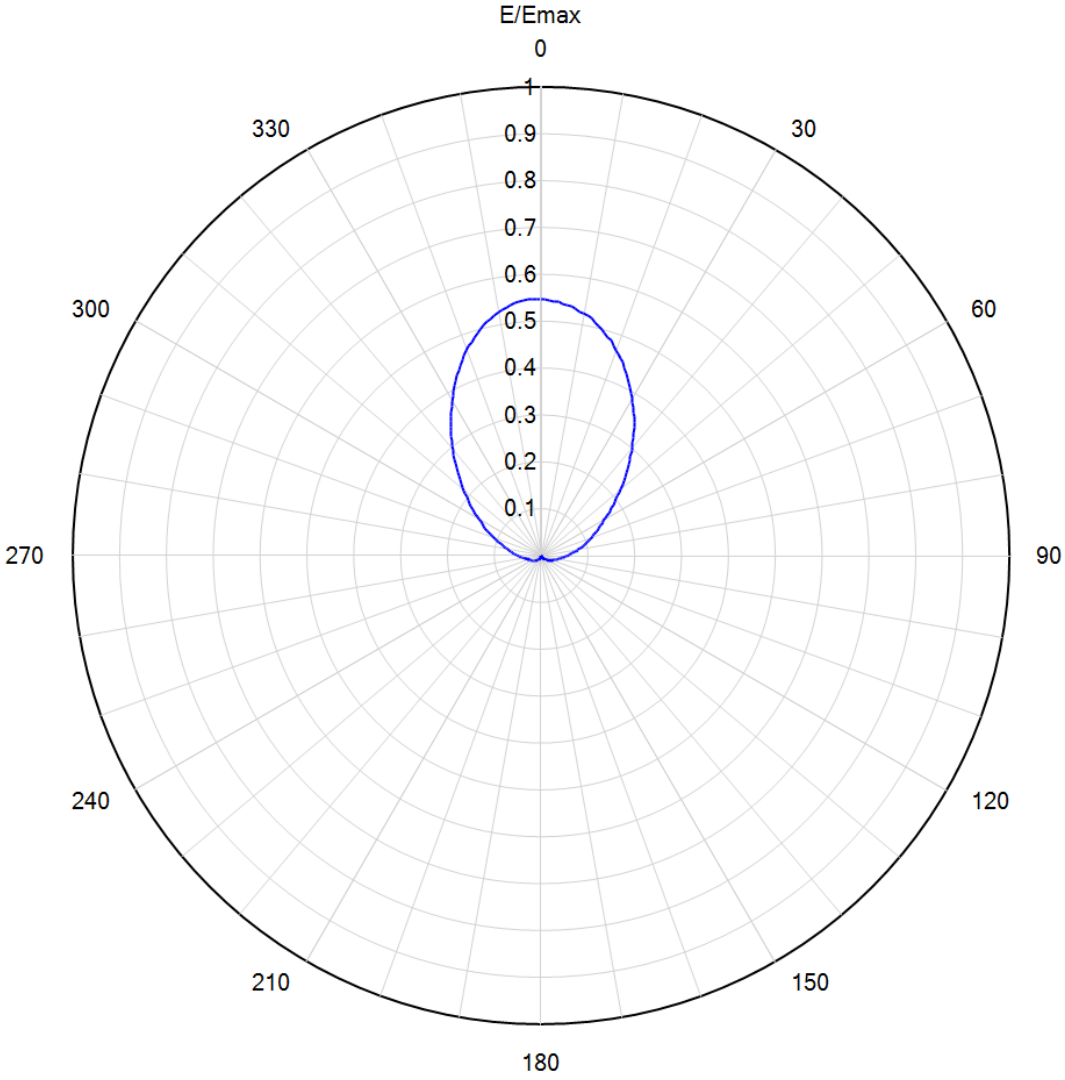
Model:	PEPL3A	Frequency:	563.00 MHz
Polarization:	Horizontal	Directivity (Main Lobe):	7.1 (8.52 dBd)
Location:	Globe Az	Directivity (At Horizon):	6.0 (7.75 dBd)
Customer:	Univision	Beam Tilt:	2.00 degrees
Date:	July 27, 2018	Azimuth Angle:	358 degrees

Model:	**PEPL3A**	Polarization:	**Horizontal**
Location:	**Globe AZ**	Frequency (MHz):	**563.00**
Customer:	**Univision**	Directivity (Main Lobe):	**7.1 (8.52 dB)**
Date:	**July 27, 2018**	Directivity (At Horizon):	**6.0 (7.75 dB)**
		Beam Tilt:	**2.00 degrees**

TABULATED ELEVATION PATTERN

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.318	2.4	0.997	10.6	0.124	30.5	0.000	51.0	0.049	71.5	0.118
-9.5	0.304	2.6	0.994	10.8	0.118	31.0	0.016	51.5	0.043	72.0	0.121
-9.0	0.283	2.8	0.988	11.0	0.117	31.5	0.031	52.0	0.037	72.5	0.124
-8.5	0.255	3.0	0.981	11.5	0.129	32.0	0.045	52.5	0.031	73.0	0.126
-8.0	0.222	3.2	0.973	12.0	0.155	32.5	0.057	53.0	0.026	73.5	0.127
-7.5	0.186	3.4	0.963	12.5	0.183	33.0	0.067	53.5	0.022	74.0	0.129
-7.0	0.153	3.6	0.951	13.0	0.209	33.5	0.076	54.0	0.018	74.5	0.129
-6.5	0.135	3.8	0.938	13.5	0.230	34.0	0.082	54.5	0.016	75.0	0.129
-6.0	0.147	4.0	0.923	14.0	0.244	34.5	0.086	55.0	0.015	75.5	0.129
-5.5	0.189	4.2	0.907	14.5	0.253	35.0	0.089	55.5	0.015	76.0	0.129
-5.0	0.249	4.4	0.890	15.0	0.255	35.5	0.089	56.0	0.016	76.5	0.128
-4.5	0.318	4.6	0.871	15.5	0.252	36.0	0.087	56.5	0.017	77.0	0.126
-4.0	0.393	4.8	0.852	16.0	0.243	36.5	0.084	57.0	0.017	77.5	0.124
-3.5	0.469	5.0	0.831	16.5	0.229	37.0	0.079	57.5	0.017	78.0	0.122
-3.0	0.546	5.2	0.809	17.0	0.211	37.5	0.072	58.0	0.017	78.5	0.120
-2.8	0.576	5.4	0.785	17.5	0.190	38.0	0.065	58.5	0.016	79.0	0.117
-2.6	0.606	5.6	0.761	18.0	0.166	38.5	0.057	59.0	0.014	79.5	0.114
-2.4	0.635	5.8	0.736	18.5	0.140	39.0	0.048	59.5	0.011	80.0	0.111
-2.2	0.663	6.0	0.711	19.0	0.115	39.5	0.040	60.0	0.008	80.5	0.107
-2.0	0.691	6.2	0.684	19.5	0.091	40.0	0.034	60.5	0.004	81.0	0.104
-1.8	0.718	6.4	0.657	20.0	0.071	40.5	0.030	61.0	0.000	81.5	0.100
-1.6	0.745	6.6	0.629	20.5	0.059	41.0	0.031	61.5	0.005	82.0	0.096
-1.4	0.770	6.8	0.601	21.0	0.060	41.5	0.035	62.0	0.010	82.5	0.091
-1.2	0.794	7.0	0.572	21.5	0.070	42.0	0.041	62.5	0.016	83.0	0.087
-1.0	0.818	7.2	0.543	22.0	0.084	42.5	0.048	63.0	0.022	83.5	0.082
-0.8	0.840	7.4	0.514	22.5	0.099	43.0	0.056	63.5	0.028	84.0	0.077
-0.6	0.861	7.6	0.485	23.0	0.112	43.5	0.062	64.0	0.034	84.5	0.073
-0.4	0.880	7.8	0.455	23.5	0.122	44.0	0.069	64.5	0.041	85.0	0.068
-0.2	0.899	8.0	0.426	24.0	0.130	44.5	0.074	65.0	0.048	85.5	0.063
0.0	0.915	8.2	0.397	24.5	0.135	45.0	0.078	65.5	0.054	86.0	0.058
0.2	0.931	8.4	0.368	25.0	0.136	45.5	0.081	66.0	0.061	86.5	0.052
0.4	0.945	8.6	0.340	25.5	0.134	46.0	0.082	66.5	0.068	87.0	0.047
0.6	0.957	8.8	0.312	26.0	0.129	46.5	0.083	67.0	0.074	87.5	0.042
0.8	0.968	9.0	0.285	26.5	0.121	47.0	0.082	67.5	0.080	88.0	0.037
1.0	0.978	9.2	0.258	27.0	0.110	47.5	0.081	68.0	0.086	88.5	0.032
1.2	0.985	9.4	0.233	27.5	0.098	48.0	0.078	68.5	0.092	89.0	0.026
1.4	0.992	9.6	0.209	28.0	0.083	48.5	0.075	69.0	0.097	89.5	0.021
1.6	0.996	9.8	0.187	28.5	0.068	49.0	0.071	69.5	0.102	90.0	0.000
1.8	0.999	10.0	0.167	29.0	0.051	49.5	0.066	70.0	0.107		
2.0	1.000	10.2	0.149	29.5	0.034	50.0	0.061	70.5	0.111		
2.2	1.000	10.4	0.135	30.0	0.017	50.5	0.055	71.0	0.115		

Azimuth Pattern



Model:	PEPL3A	Polarization:	Vertical
Location:	Globe Az	Frequency:	563.00 MHz
Customer:	Univision	Directivity:	5.6 (7.44 dB)
Date:	July 27, 2018	Elevation Angle:	2.00 degrees
Rotation Angle:	0 degrees	Horizontal Unit Pattern:	
Note: Pattern Tolerance +/-5% of Emax		File = az_v_imm_unit_563.pat	

Note: Multiply normalized values shown by polarization ratio (0.548) to obtain actual radiation in each direction.

RADIO FREQUENCY SYSTEMS
The Clear Choice®

Model:	**PEPL3A**	Polarization:	**Vertical**
Location:	**Globe, AZ**	Frequency (MHz):	**563.00**
Customer:	**Univision**	Directivity:	**5.6 (7.44 dB)**
Date:	**July 27, 2018**	Elevation Angle:	**2.00 degrees**
		Rotation Angle:	**0 degrees**

TABULATED AZIMUTH PATTERN

Angl	Field	Angl	Field	Angl	Field	Angl	Field	Angl	Field	Angl	Field	Angl	Field	Angl	Field
0	0.998	45	0.478	90	0.104	135	0.017	180	0.007	225	0.029	270	0.093	315	0.459
1	1.000	46	0.465	91	0.100	136	0.019	181	0.005	226	0.029	271	0.097	316	0.473
2	0.995	47	0.450	92	0.096	137	0.017	182	0.006	227	0.031	272	0.101	317	0.488
3	0.992	48	0.434	93	0.094	138	0.020	183	0.004	228	0.031	273	0.103	318	0.502
4	0.992	49	0.421	94	0.093	139	0.016	184	0.003	229	0.031	274	0.106	319	0.519
5	0.984	50	0.406	95	0.085	140	0.021	185	0.003	230	0.034	275	0.111	320	0.532
6	0.982	51	0.392	96	0.083	141	0.019	186	0.004	231	0.035	276	0.114	321	0.550
7	0.977	52	0.378	97	0.080	142	0.015	187	0.004	232	0.036	277	0.118	322	0.566
8	0.972	53	0.367	98	0.078	143	0.012	188	0.004	233	0.039	278	0.121	323	0.580
9	0.962	54	0.356	99	0.076	144	0.016	189	0.003	234	0.038	279	0.126	324	0.598
10	0.956	55	0.345	100	0.072	145	0.017	190	0.006	235	0.041	280	0.130	325	0.612
11	0.951	56	0.332	101	0.070	146	0.017	191	0.007	236	0.039	281	0.137	326	0.628
12	0.944	57	0.321	102	0.065	147	0.012	192	0.008	237	0.039	282	0.140	327	0.643
13	0.931	58	0.310	103	0.066	148	0.016	193	0.011	238	0.040	283	0.146	328	0.661
14	0.923	59	0.300	104	0.063	149	0.015	194	0.011	239	0.040	284	0.152	329	0.677
15	0.912	60	0.291	105	0.061	150	0.015	195	0.012	240	0.040	285	0.158	330	0.692
16	0.902	61	0.279	106	0.060	151	0.016	196	0.013	241	0.043	286	0.164	331	0.709
17	0.888	62	0.273	107	0.057	152	0.010	197	0.013	242	0.045	287	0.171	332	0.724
18	0.881	63	0.263	108	0.055	153	0.008	198	0.014	243	0.045	288	0.178	333	0.742
19	0.863	64	0.257	109	0.055	154	0.011	199	0.016	244	0.043	289	0.186	334	0.757
20	0.851	65	0.247	110	0.054	155	0.007	200	0.015	245	0.044	290	0.192	335	0.774
21	0.840	66	0.239	111	0.052	156	0.006	201	0.016	246	0.045	291	0.201	336	0.790
22	0.829	67	0.232	112	0.048	157	0.006	202	0.016	247	0.046	292	0.207	337	0.804
23	0.817	68	0.225	113	0.049	158	0.006	203	0.017	248	0.048	293	0.216	338	0.820
24	0.800	69	0.218	114	0.051	159	0.004	204	0.018	249	0.047	294	0.223	339	0.835
25	0.783	70	0.213	115	0.046	160	0.001	205	0.020	250	0.048	295	0.233	340	0.848
26	0.769	71	0.205	116	0.045	161	0.008	206	0.018	251	0.053	296	0.243	341	0.863
27	0.752	72	0.198	117	0.041	162	0.006	207	0.018	252	0.049	297	0.249	342	0.875
28	0.740	73	0.192	118	0.041	163	0.006	208	0.019	253	0.050	298	0.262	343	0.886
29	0.724	74	0.186	119	0.043	164	0.004	209	0.018	254	0.053	299	0.269	344	0.899
30	0.708	75	0.181	120	0.039	165	0.008	210	0.018	255	0.057	300	0.280	345	0.913
31	0.691	76	0.173	121	0.037	166	0.009	211	0.018	256	0.057	301	0.289	346	0.924
32	0.679	77	0.168	122	0.036	167	0.010	212	0.019	257	0.061	302	0.300	347	0.934
33	0.658	78	0.163	123	0.033	168	0.010	213	0.019	258	0.060	303	0.309	348	0.943
34	0.649	79	0.157	124	0.033	169	0.010	214	0.019	259	0.064	304	0.322	349	0.952
35	0.633	80	0.152	125	0.030	170	0.008	215	0.019	260	0.067	305	0.333	350	0.964
36	0.617	81	0.145	126	0.035	171	0.011	216	0.021	261	0.068	306	0.343	351	0.969
37	0.597	82	0.143	127	0.034	172	0.010	217	0.020	262	0.071	307	0.352	352	0.974
38	0.581	83	0.137	128	0.029	173	0.010	218	0.020	263	0.074	308	0.367	353	0.981
39	0.568	84	0.132	129	0.026	174	0.009	219	0.021	264	0.075	309	0.380	354	0.987
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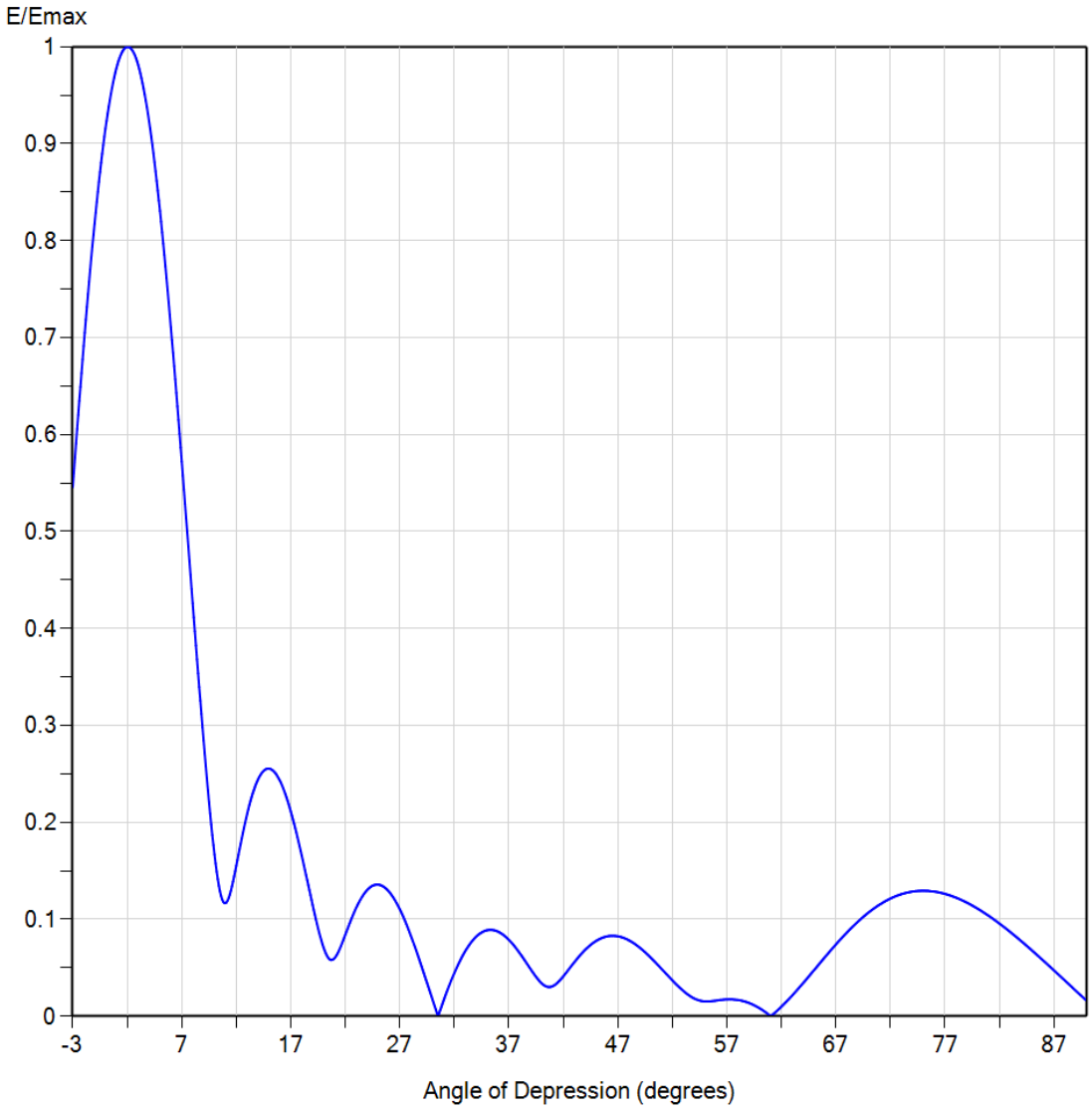
Elevation Pattern



Model:	PEPL3A	Frequency:	563.00 MHz
Polarization:	Vertical	Directivity (Main Lobe):	7.1 (8.52 dBd)
Location:	Globe Az	Directivity (At Horizon):	6.0 (7.75 dBd)
Customer:	Univision	Beam Tilt:	2.00 degrees
Date:	July 27, 2018	Azimuth Angle:	359 degrees

Model:	**PEPL3A**	Polarization:	**Vertical**
Location:	**Globe, AZ**	Frequency (MHz):	**563.00**
Customer:	**Univision**	Directivity (Main Lobe):	**7.1 (8.52 dB)**
Date:	**July 27, 2018**	Directivity (At Horizon):	**6.0 (7.75 dB)**
		Beam Tilt:	**2.00 degrees**

TABULATED ELEVATION PATTERN

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.318	2.4	0.997	10.6	0.124	30.5	0.000	51.0	0.049	71.5	0.118
-9.5	0.304	2.6	0.994	10.8	0.118	31.0	0.016	51.5	0.043	72.0	0.121
-9.0	0.283	2.8	0.988	11.0	0.117	31.5	0.031	52.0	0.037	72.5	0.124
-8.5	0.255	3.0	0.981	11.5	0.129	32.0	0.045	52.5	0.031	73.0	0.126
-8.0	0.222	3.2	0.973	12.0	0.155	32.5	0.057	53.0	0.026	73.5	0.127
-7.5	0.186	3.4	0.963	12.5	0.183	33.0	0.067	53.5	0.022	74.0	0.129
-7.0	0.153	3.6	0.951	13.0	0.209	33.5	0.076	54.0	0.018	74.5	0.129
-6.5	0.135	3.8	0.938	13.5	0.230	34.0	0.082	54.5	0.016	75.0	0.129
-6.0	0.147	4.0	0.923	14.0	0.244	34.5	0.086	55.0	0.015	75.5	0.129
-5.5	0.189	4.2	0.907	14.5	0.253	35.0	0.089	55.5	0.015	76.0	0.129
-5.0	0.249	4.4	0.890	15.0	0.255	35.5	0.089	56.0	0.016	76.5	0.128
-4.5	0.318	4.6	0.871	15.5	0.252	36.0	0.087	56.5	0.017	77.0	0.126
-4.0	0.393	4.8	0.852	16.0	0.243	36.5	0.084	57.0	0.017	77.5	0.124
-3.5	0.469	5.0	0.831	16.5	0.229	37.0	0.079	57.5	0.017	78.0	0.122
-3.0	0.546	5.2	0.809	17.0	0.211	37.5	0.072	58.0	0.017	78.5	0.120
-2.8	0.576	5.4	0.785	17.5	0.190	38.0	0.065	58.5	0.016	79.0	0.117
-2.6	0.606	5.6	0.761	18.0	0.166	38.5	0.057	59.0	0.014	79.5	0.114
-2.4	0.635	5.8	0.736	18.5	0.140	39.0	0.048	59.5	0.011	80.0	0.111
-2.2	0.663	6.0	0.711	19.0	0.115	39.5	0.040	60.0	0.008	80.5	0.107
-2.0	0.691	6.2	0.684	19.5	0.091	40.0	0.034	60.5	0.004	81.0	0.104
-1.8	0.718	6.4	0.657	20.0	0.071	40.5	0.030	61.0	0.000	81.5	0.100
-1.6	0.745	6.6	0.629	20.5	0.059	41.0	0.031	61.5	0.005	82.0	0.096
-1.4	0.770	6.8	0.601	21.0	0.060	41.5	0.035	62.0	0.010	82.5	0.091
-1.2	0.794	7.0	0.572	21.5	0.070	42.0	0.041	62.5	0.016	83.0	0.087
-1.0	0.818	7.2	0.543	22.0	0.084	42.5	0.048	63.0	0.022	83.5	0.082
-0.8	0.840	7.4	0.514	22.5	0.099	43.0	0.056	63.5	0.028	84.0	0.077
-0.6	0.861	7.6	0.485	23.0	0.112	43.5	0.062	64.0	0.034	84.5	0.073
-0.4	0.880	7.8	0.455	23.5	0.122	44.0	0.069	64.5	0.041	85.0	0.068
-0.2	0.899	8.0	0.426	24.0	0.130	44.5	0.074	65.0	0.048	85.5	0.063
0.0	0.915	8.2	0.397	24.5	0.135	45.0	0.078	65.5	0.054	86.0	0.058
0.2	0.931	8.4	0.368	25.0	0.136	45.5	0.081	66.0	0.061	86.5	0.052
0.4	0.945	8.6	0.340	25.5	0.134	46.0	0.082	66.5	0.068	87.0	0.047
0.6	0.957	8.8	0.312	26.0	0.129	46.5	0.083	67.0	0.074	87.5	0.042
0.8	0.968	9.0	0.285	26.5	0.121	47.0	0.082	67.5	0.080	88.0	0.037
1.0	0.978	9.2	0.258	27.0	0.110	47.5	0.081	68.0	0.086	88.5	0.032
1.2	0.985	9.4	0.233	27.5	0.098	48.0	0.078	68.5	0.092	89.0	0.026
1.4	0.992	9.6	0.209	28.0	0.083	48.5	0.075	69.0	0.097	89.5	0.021
1.6	0.996	9.8	0.187	28.5	0.068	49.0	0.071	69.5	0.102	90.0	0.000
1.8	0.999	10.0	0.167	29.0	0.051	49.5	0.066	70.0	0.107		
2.0	1.000	10.2	0.149	29.5	0.034	50.0	0.061	70.5	0.111		
2.2	1.000	10.4	0.135	30.0	0.017	50.5	0.055	71.0	0.115		